The Capitol Hill Monitor

Volume 1 Issue 8 October 1995

MARYLAND STATE HIGHWAY ADMINISTRATION

The Maryland State Highway Administration (SHA) recently reconfigured its channel plan. Let's take a quick look at the changes and additions before the snow starts! With the exception of districts 1 and 4, each district finally has its own working channel. And now, selected state police channels have been added to allow for direct communication between the two agencies.

CTCSS tones for channels 1 through 8 are 94.8 Hz. The MSP channels use a CTCSS of 110.9 Hz, with the exception of 39.1 (CSQ) and 39.24 (127.3 Hz).

SHA's Statewide Operations Center (SOC), located at the BWI airport, provides frequent weather reports and snow advisories to crews in the field on SHA's 47 MHz channels. The SOC is also licensed on the fire mutual aid channels, 154.28 and 154.295, but no activity has been heard from them yet.

The Maryland Emergency Management Agency (MEMA) often conducts disaster drills over 47.32, SHA's statewide channel. In addition to the seven SHA districts, the Harbor Tunnel, Bay Bridge, Mass Transit Administration, Motor Vehicle Adminsistration, State Aviation Administration, BWI (Friendship), among others, have capability of transmitting on 47.32 for coordination purposes.

SHA has licensed several telemetry systems in the mountainous areas of Garrett and Washington counties on 452.35, 452.5 and 453.05 (anyone know what for?). SHA vehicular repeaters operate on 458.9625.

District-level SHA personnel generally identify by four-digit numbers. The first digit indicates the district, and the second, the county. Second digits which are zero are district-wide personnel.

SHA at a glance

County	District	Channel	Frequency
Allegany	6	6	47.10
Anne Arundel	5	8	47.02
Baltimore	4	3	47.40
Baltimore City	4	3	47.40
Calvert	5	8	47.02
Caroline	2	4	47.14
Carroll	7	7	47.12
Cecil	2	4	47.14
Charles	5	8	47.02
Dorchester	1	3	47.40
Frederick	7	7	47.12
Garrett	6	6	47.10
Harford	4	3	47.40
Howard	7	7	47.12
Kent	2	4	47.14
Montgomery	3	5	47.20
Prince George's	3	5	47.20
Queen Anne's	2	4	47.14
Saint Mary's	5	8	47.02
Somerset	1	3	47.40
Talbot	2	4	47.14
Washington	6	6	47.10
Wicomico	1	3	47.40
Worcester	1	3	47.40

SHA's new channel plan

47.32	F1: Statewide
47.26	F2: Traffic & Safety Office
47.40	F3: Districts 1 and 4
47.14	F4: District 2
47.20	F5: District 3
47.10	F6: District 6
47.12	F7: District 7
47.02	F8: District 5
??.??	F9: Blank (future)
39.10	F10: MSP 1 (Statewide)
39.44	F11: MSP Golden Ring R
39.04	F12: MSP Glen Burnie P
39.24	F13: MSP JFK Highway M
39.40	F14: MSP Frederick B
44.74	F15: MSP Civil Defense Net
39.14	F16: MSP Annapolis J

District Headquarters	District	Channel	Frequency	Call Sign
Salisbury	1	3	47.40	KGG850
Chestertown	2	4	47.14	WQK875
Greenbelt	3	5	47.20	WQK876
Brooklandville	4	3	47.40	WQK336
Annapolis	5	8	47.02	KBQ265
Cumberland	6	6	47.10	KGG931
Frederick	7	7	47.12	KGG842

SHA adopted the MSP 10 codes (and abandoned its former 10 and signal codes). SHA traffic-signal technicians also use the following 11-codes.

11- 1 Officials or visitors
11- 2 Call your office by telephone
11- 3 Call your office by telephone immediately
11- 4 Any traffic for this unit?
11- 5 Bulb out
11- 6 Signal stuck
11- 7 Timing is out
11- 8 Signal on flash
11- 9 Signal involved in accident
11-10 Repeat the complaint on signal at ___
11-11 Request police for traffic control
11-12 Signal has been repaired at ___
11-13 No trouble found
11-14 Where did complaint originate?

VIRGINIA DEPARTMENT OF TRANSPORTATION

Maryland hasn't been the only state to add new channels to its transportation radios. On the other side of the river, VDOT has licensed 45.76, 47.04 and 47.24. Allen Cole says try monitoring the 47.04 and 47.24 channels for activity in the Northern Virginia area, where VDOT is expected to first implement the two new channels. (Repeated monitoring has heard no traffic on these channels). Last winter we also monitored activity on 47.30 [77.0 Hz] in the Northern Virginia area. 45.76 is a statewide VDOT construction channel, which might be worth checking out. Unlike Maryland, VDOT is responsible for highway maintenance and construction of ALL roads and streets located outside incorporated cities.

47.22 F1:
TMS, Dulles Toll Road and Bristol, Fredericksburg, Lynchburg and Staunton Districts

47.34 F2:
Culpeper and Richmond Districts

47.28 F3:
Northern Virginia and Suffolk Districts

47.30 F4:
Salem District

Virginia is divided into nine construction districts. Local operations are conducted out of several residency offices within each district. Each residency serves one or more counties. In turn, the residencies are divided into areas, each with a headquarters. Each office has base station capability for the channels used in its district and identifies by its location, *e.g.*, "Newington", "Lake Ridge".

VDOT areas do not follow county lines, but rather the state and federal road network. All VDOT units have a unique radio identification number. The first two digits identify the residency and the last two digits are assigned to units within an area.

Traffic engineers at the $25-million VDOT Traffic Management System (TMS) facility on Columbia Pike in Arlington, built in June of 1985, monitor 48 cameras, 550 pavement sensors and control the reversible lanes on I-395 and operate 100 changeable highway signs. TMS also controls the High Occupancy Vehicle (HOV) lanes and ramp meters (the computer-controlled signals on selected interstate ramps).

VDOT Safety Service Patrol units help stranded motorists on seven routes across northern Virginia. VDOT Safety Patrols communicate with VSP troopers on 154.665 and with Fairfax VSP base on the appropriate VSP dispatch channel. The VDOT Safety Service Patrols operate orange VDOT vehicles, primarily pickup trucks, but also vans and wreckers, which should not be confused with the white Motorist Assistance Patrol sedans with amber lights operated by VSP that occasionally operate in the Northern Virginia area.. These, in turn, should not be confused with the DMV enforcement vehicles which are also white with amber lights.

VDOT Official 10-Signal List
10- 1 Receiving poorly
10- 2 Receiving well
10- 3 Emergency message (this signal has precedence)
10- 4 Acknowledgment (OK)
10- 5 Relay message to ___
10- 6 Busy, stand by (unless an emergency)
10- 7 Out of service
10- 8 In service
10-11 Dispatching too rapidly
10-13 Advise weather and road conditions at ___
10-18 Proceed to this headquarters
10-19 Return to your headquarters
10-20 What is your location?
10-21 Call this station by phone
10-22 If ___ is in the office, I will call by phone
10-36 Correct time
10-50 All stations stand by for weather report
10-55 Checks are ready for distribution or are checks ready for pick up?
10-60 Traffic signal needs repair at ___
10-63 Prepare to make written copy
10-65 Do you have any messages for me?
10-68 Repeat message (did not copy)
10-70 ___ samples are ready for pick up on project ___
10-71 Please advise test results of ___ samples on project ___
10-77 How is reception?
10-80 Dead animal in road at ___
10-99 Unable to receive your signals

VDOT Districts
1 Bristol
(Bland, Buchanan, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe)

2 Salem
(Bedford, Botetourt, Carroll, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski and Roanoke)

3 Lynchburg
(Amherst, Appomattox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Nelson, Pittsylvania and Prince Edward)

4 Richmond
(Amelia, Brunswick, Charles City, Chesterfield, City of Richmond, Dinwiddie, Goochland, Hanover, Henrico, Lunenburg, Mecklenburg, New Kent, Nottoway, Powhatan and Prince George)

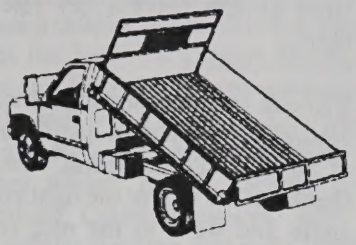
5 Suffolk
(Accomack, Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Suffolk and Virginia Beach, Greensville, Isle of Wight, James City, Northampton, Southampton, Surry, Sussex and York)

6 Fredericksburg
(Caroline, Essex, Gloucester, **King George**, King William, King & Queen, Lancaster, Mathews, Middlesex, Northumberland, Richmond, **Spotsylvania, Stafford** and Westmoreland)

7 Culpeper
(Albemarle, **Culpeper, Fauquier,** Fluvanna, Greene, Louisa, Madison, Orange and Rappahannock)

8 Staunton
(Alleghany, Augusta, Bath, Clarke, Frederick, Highland, Page, Rockbridge, Rockingham, Shenandoah and Warren)

9 Northern Virginia
(Arlington, City of Alexandria, Fairfax, Loudoun and Prince William)



DISTRICT SNOW PLOWS

Any District public works truck capable of pushing a plow is likely to be drafted for snow removal operations. Snow plows in the District normally operate on one of four public works channels, 37.1, 37.94, 453.45 and 453.75. Of special interest is the snow room which identifies as "Control 10A" on 453.45.

UPDATE: AIRPORT AUTHORITY TRUNKED SYSTEM

The deadline for offer submission for the Metropolitan Washington Airports Authority's trunked radio system mentioned in last month's newsletter has been extended to Oct. 31. In an amendment to the RFP, the authority states the following agencies and governmental jurisdictions must be able to directly communicate with the authority: Fairfax County fire, Arlington County fire, Loudoun County public safety, DC fire, State Department, Secret Service, PMARS (453.55), FMARS (154.265, 154.28 and 154.295) and marine channels 16, 17 and 22 (156.8, 156.85 and 157.1).

Of the 19 vendors who attended the conference held to discuss the trunked system, eight came from Motorola and two from Ericsson-GE. The other nine were representatives of smaller vendors.

HIGH-TECH SURVEILLANCE IN LONDON

by Mike McKeehan

A couple months ago while in London on business I had an opportunity to visit with the City of London police. The "City" is a separate jurisdiction within metropolitan London covering about one square mile. Roughly bordered by the Thames to the south, Tower Bridge to the east, and Blackfriars Bridge to the west, the City is centered around the Bank of England complex and the financial district, which includes stock exchanges and banks.

As a result, there are two aspects which make policing in the City unique: a massive influx of people during work hours (and deserted streets at night) as well as attractive targets for terrorists. There have been several terrorist bombings in the United Kingdom over the last decade. In 1993 a van packed with dynamite exploded in the City, resulting in a blast that was several times more devastating to property than the Oklahoma City bombing.

The crater where the van was parked was 40-feet deep and windows were blown out of office buildings a half-mile away! Fortunately, this bomb went off early on a Sunday morning, limiting loss of life to one constable. Damage from this blast could still be seen early this spring.

As a result of these terrorist incidents, the City of London police have deployed a sophisticated surveillance system within the City. More than two dozen color video cameras have been mounted on poles on the main thoroughfares into and out of the City. The video signals are routed by coax cable into a command center in police headquarters, where a constable monitors the comings and goings of all vehicular traffic in the City. The cameras zoom in and out, as well as pan to provide the best possible view of what's happening on the street.

As an aid to the video surveillance, the City made many streets one-way and added concrete medians to force cars and trucks to maneuver slowly, allowing the monitoring constable to zoom in on suspicious vehicle's license plates. At many of these *chicanes* are foot patrolmen, who can be contacted by the command center via UHF radio (450-460 MHz band) to stop and check out suspicious vehicles. Further, if the command center notices a vehicle stopped in a prohibited zone, an officer is dispatched to check them out and move them along.

You might be thinking now about the danger of an unarmed "bobby" approaching a van full of terrorists. There is a continuing controversy throughout the United Kingdom regarding arming all police officers. Currently in the City, the only constables carrying weapons are in the heavily armed anti-terrorist unit, similar to our SWAT teams.

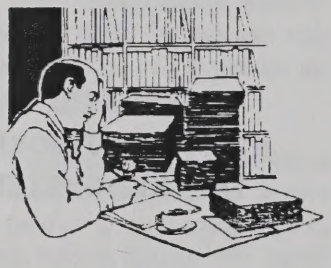
The difference is that a van load of these officers is always on duty, waiting to respond to any call in the City where a weapon of any type might be involved. Between calls they routinely conduct vehicle stops and mini-roadblocks. Mostly though, they try to keep moving so the bad guys can't ascertain where the armed squad might be at any given moment.

The night I rode along with Constable Barrie Greenall, not much was happening (see above regarding mostly daytime population) so we spent quite a bit of time at the command center playing with the various cameras. The constable monitoring the cameras, the dispatcher and the watch commander are all seated in close proximity, and the camera monitor can talk directly with the units on the street through the console. As you might expect, radio traffic was light, but you could still sense an edge whenever a suspicious vehicle came into the City and officers responded to check it out. The constables of the City of London take their anti-terrorism efforts seriously, and their high-tech surveillance system plays a key role in that fight.

If you're ever in London and wandering around in the financial district or the area of Saint Paul's Cathedral, look up and check out the tops of the light poles, then smile and wave to the nice constable! And, be discrete with your scanner because listening to police, fire, or military communications is illegal; getting locked up and having your scanner confiscated could ruin your trip.

Next Time: Riding with the Melbourne Australia Watch Commander.

NEWSSCAN



by Brent Baker

US-MADE HELMET COMPUTERS IN ENGLAND? "ROBOCOP, the futuristic Hollywood law enforcer, has arrived in Britain. Police forces are equipping officers with experimental electronic technology that could revolutionize crime-fighting," boasts a recent lead in the Sunday Times.

The systems will affect every aspect of police work, including the traditional blue helmets, which are being adapted to house computers with screens under their brims. The aim is to give officers an electronic link to police intelligence, criminal records and other databases while on patrol. Beat bobbies and police motorcyclists will have the devices attached to their clothing, while officers in vehicles will have screens on their dashboards.

The new computer helmet, tested by the Cleveland and Tayside forces, costs £8,000 (@ $12,000). It has a small eyepiece which can be used by officers to view detailed information such as a picture of a suspect. "Officers will be able to call up text and graphics from police computers. Special weapons squads could scan the plans of a building they were about to raid," said Richard Goodale, of InterVision, which imports the equipment from the United States.

Andy Lombard, head of information technology at Cleveland, said the computers give officers access to the police national computer, local intelligence databases, driver and vehicle registration records and electoral rolls. In two years, the article claimed, the force will be able to send computerized photographs of suspects and other material using Poirot, an acronym for its Prisoner Online Information Retrieval using Open Technology system. *(Edit. Note: Poirot is also the name of a famous fictional detective, created by the British author Agatha Christie).*

PHONE CLONERS HIT ROYALS AND MINISTERS. The British armed forces minister, Nicholas Soames, was surprised earlier this year to find his ministry the target of criminals exploiting the latest £200m (@$300m) racket in mobile phones.

The Sunday Times reported that Soames discovered that unidentified hackers had locked on to and then stole the numbers and secret identification codes of Ministry of Defense (MoD) car phones. The minister confided to a fellow MP that numbers and codes had been illegally copied on to other mobile phones, allowing criminals to run up huge costs that were billed to the MoD, one of the latest victims of the cloners. In the past year, the Sunday Times stated, they have spread their net across Britain to include a growing number of senior politicians and Whitehall mandarins.

At the MoD about 27 car phones have been cloned over the past year. The home office had 12 mobile phones cloned and

officials in other departments, including Social Security, the Northern Ireland office, the Treasury and the Ministry of Agriculture have been defrauded. Cloning gangs have also targeted the royal family. Earlier this year, the Duke of York received a £2,500 quarterly bill after cloners used his number to make long-distance calls. Police say two of the Queen's mobile phones were changed after suspicions that they had been cloned.

Most of Britain's 4m mobile phone users have analog phones which experts say are extremely easy to clone because they send out a radio signal that identifies the phone number and the electronic serial number. Anyone can legally buy a scanner for £2,000 (@$3,000), claimed the Sunday Times, from specialist telecommunication shops, which is designed for "recreational use" to scan the airwaves. It works within half a square mile and can track and steal both numbers. These are stored in the scanner and can subsequently be transferred to another mobile phone through connecting leads. The cloned phones can then be used to make calls anywhere.

The growing threat of such fraud was exposed earlier this month after a gang involved in a swindle costing British Telecom and Mercury £3m was convicted of stealing thousands of numbers and cloning hundreds of phones. In the most organized version of the racket so far, the gang was hiring out the phones at £20 an hour to "customers" who were using them to make long-distance calls.

So worrying is the trend that Scotland Yard has decided to set up "clone-busting" units across London. Each will be supplied with its own sophisticated counter-scanning device to target the criminals. Police and politicians believe there needs to be a change in the law to allow easier prosecution of cloners. Even if a person is found in possession of a cloned phone, no offense is committed unless they are caught using it.

THE INFORMATION ASSASSINS. If you use a cellular phone, fax or computer, warns the Sept. 24 Calgary Herald, be aware that high-tech eavesdropping is not just the stuff of spy movies. In the article, reporter Rick Mofina interviewed Bill Fischer whose "private security firm," Electronic Countermeasures, sells the CSI cellular-tracking computer interface to professionals and hobbyists alike.

"The biggest thing that people have to be aware of today is somebody is listening," warned Fischer. "Most firms believe it won't happen to them," says Fischer, who was recently asked to demonstrate security vulnerability to a local corporation, a prospective client.

Fischer established a new phone number with a voice mail line in the firm. Then he and a colleague, using cellular phones, had a series of "private conversations" saying a company would give away a free car to anyone who called the number and left their name. The call was supposed to be internal information. "Within nine hours 14 people called and left their name," Fischer claimed.

"His illustration underscores a hard, new reality," the article noted. "In the information age of computers, faxes and telecommunications, privacy is melting." In Canada, laws on electronic eavesdropping or interception are complex. It is generally regarded as legal to listen to information that goes "out over the air." But what is done with that information -- like unfairly profiting by it -- becomes subject to prosecution, or civil action.

Some important safeguards for the information age: Be careful what you say over the phone or in a fax on sensitive subjects. Carefully store and dispose of sensitive documents. Use cryptography (coding) and other security measures to protect information. Protect computer databases and networks from unauthorized access. Carefully screen employees and visitors.

For details on the CSI interface, write: Electronic Countermeasures,
65 - 31 Avenue SW, Calgary, Alberta, Canada T2S 2Y7.

OPERATOR ERROR TURNS OFF MILLIONS OF PAGERS. Millions of personal pagers across the country were rendered useless on Sept. 26 when a computer operator reportedly inadvertently sent out a command that turned off thousands of satellite receivers. Space Com, a Tulsa-based satellite transmission service, had to manually reprogram the receivers one by one. About 95 percent of service, reported the Associated Press, was restored by the end of the workday, and the remainder was expected to be back on the next day.

Space Com has contracts with five of the 10 largest paging companies. Its biggest contract is with Pagenet, which has more than 6 million pagers across the country. Pagenet could not estimate how many of its customers were without service.

According to the AP: Two satellite pager frequencies serve the United States, FM-cubed and FM-squared. In addition, some pagers are served by telephone links. Space Com operates an uplink satellite system. Companies send paging data to the satellite receivers, which relay it to the companies' transmitters in other cities and on to the pagers.

Al Stem, vice present and general manager of Space Com, said its receivers were turned off between 1 and 3 a.m. on Sept. 26 when an operator giving the wrong command ordered the satellite to off-load all the addresses on the FM-squared frequency. "It's a pretty bad dream," Stem told the AP. "This hasn't ever happened before. And we're putting additional systems in place to make sure it never happens again."

CELL PHONE CALLERS AID POLICE. A Dr. Gridlock column in a recent Washington Post reported that in July, motorists traveling along Interstate 64 in Norfolk were startled to see a naked man walking along the shoulder of the road. "Within minutes," stated one police official, "we had 100 cellular phone calls telling us about it."

State police in Virginia and Maryland are receiving so many #77 and 9-1-1 calls from cellular phones that their switchboards sometimes are jammed. The article reported that the numerous calls received regarding the naked man caused the Virginia State Police emergency line to freeze. As a useful tip, #77 and 9-1-1 reportedly work on both cellular systems regardless if the phone is registered for service or not.

By Bill Hardman

Aeronautical Frequency Directory, 3rd Edition, Robert A. Coburn. Price and additional information available from Official Scanner Guide, P.O. Box 712, Londonderry, NH 03053.

The third edition of this guide is full of helpful information on both civil and military aviation frequencies and locations, including many explanations of what they are used for. The guide covers the entire U.S. and is extremely useful to both beginning and advanced monitors of aviation communications.

Mr. Coburn and his cohorts have made a substantial effort to give us more than just a frequency dump. Various aeronautical systems are explained in detail and in language a layman can understand. In the state section, the comments column contains who actually uses the frequency - *e.g.*, Delta Airlines *vis-vis* Aeronautical Radio Inc. As with all nationwide directories, it suffers when listing uses in areas with which the editors are not familiar - and occasionally where they are. For example, in locations - Sandston, VA, is Byrd Field (Richmond), yet there are separate entries because of how the frequencies are licensed. Similarly, Centreville, Herndon, and Sterling, VA, are all Washington-Dulles International. However, that is nit-picking, and at worst a minor inconvenience. **Overall, this is a superb book that is well worth its price.**

LOOKING FOR A USED SCANNER?

BEARCAT 760XLT FOR SALE. This is a 100-channel mobile/base scanner which includes the 800 MHz band and comes with the MPC cigarette lighter cord, antenna and AC adapter. Larry says he paid $249.99 and is asking $125.00 for the radio. If you are interested, please contact Larry at 301-253-2450 (home) or 301-253-8404 (pager).

PRO-43 FOR SALE. Mike Totten says the 100-channel cellular-restored Pro-43 scanner is in good shape (inside and out) and includes the nicads and AC adapter. If interested, please call Mike at 301-853-1701.

Please address all correspondence to Alan. We encourage readers to submit material and write articles which relate to the hobby. All submissions are subject to editing for both style and content.

When submitting material please make certain we have your phone number should we have any questions. We welcome frequency and visitor requests, but please include a SASE.

Alan Henney
6912 Prince George's Avenue
Takoma Park, MD 20912-5414
301-270-2531 (voice)
301-270-5774 (fax)
henney@gwis2.circ.gwu.edu (e-mail)

Newsletter Staff
Alan Henney, General Editor and Acting Treasurer
Willard Hardman, Executive Editor
Brent Baker, NewsScan Editor
Mike Peyton & Dave Clark, Distribution

The Capitol Hill Monitor is the non-profit monthly newsletter of the *Capitol Hill Monitors*. The newsletter keeps scanner enthusiasts abreast of local meetings, frequency profiles, and other topics of interest. Dues are $10 and include 12 issues of the newsletter. Back issues are available for $1 each. Please make checks payable to Alan Henney. Membership will be prorated accordingly in the event of a postage increase.

Meeting Coordinators
Maryland & DC:
Mike Peyton, 703.749.7379
Northern Virginia:
Ken Fowler, 703.385.2165

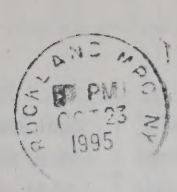
Frequency Forum Computer Bulletin Board
We encourage computer users to log onto Jack Anderson's Frequency Forum computer BBS at 703.207.9622 (8-N-1). Frequency Forum is the official electronic gathering place for readers of the *Capitol Hill Monitor*.

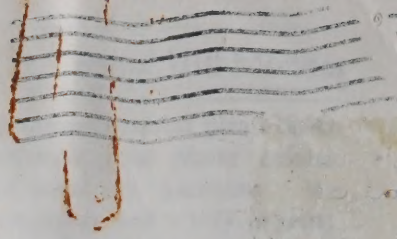
© COPYRIGHT 1995

All or portions of this newsletter may be reproduced for NON-COMMERCIAL purposes provided *The Capitol Hill Monitor* is given credit. The CHM requests a copy of such use.

The Capitol Hill Monitor

6912 Prince Georges Avenue
Takoma Park, MD 20912





8 Issues Remaining

ALAN HENNEY
6912 PRINCE GEORGES AVE
TAKOMA PARK MD 20912-5614